

## Segmented MEMS Mirror Arrays, Phase II

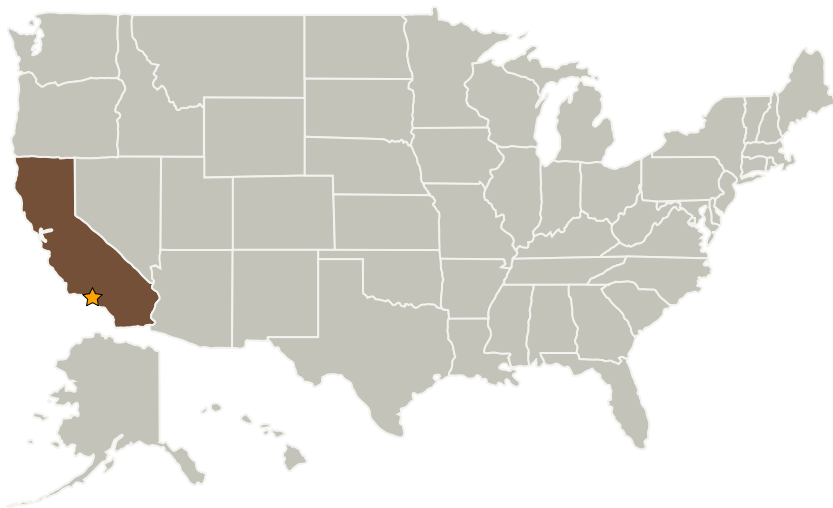
Completed Technology Project (2004 - 2004)



## Project Introduction

The objective of this proposal is to deliver state-of-the-art, bench-top deployable, large-throw and tip/tilt, low cross-talk, high resolution, highly scalable and fast response wavefront control devices (deformable mirror, or DM) based on micro-electro-mechanical (MEMS) fabrication processes. The device consists of Segmented Membrane Arrays (SMA). The design uses highly uniform (both mechanically and optically) arrays of mirror pixels to eliminate the cross talk with adjacent elements, which is usually observed in continuous membrane devices. It opens new opportunities to make ideal deformable mirrors with large-throw and independent addressing capabilities.

## Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★ Jet Propulsion Laboratory (JPL)	Lead Organization	NASA Center	Pasadena, California
Umachines, Inc.	Supporting Organization	Industry	Altadena, California

## Primary U.S. Work Locations

California



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## Organizational Responsibility

**Responsible Mission Directorate:**

Space Technology Mission Directorate (STMD)

**Lead Center / Facility:**

Jet Propulsion Laboratory (JPL)

**Responsible Program:**

Small Business Innovation Research/Small Business Tech Transfer

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### Project Management

**Program Director:**

Jason L Kessler

**Program Manager:**

Carlos Torrez

### Technology Areas

**Primary:**

- TX08 Sensors and Instruments
  - └ TX08.2 Observatories
    - └ TX08.2.1 Mirror Systems